Author Index — *Journal of Food Science* — Volume 32, 1967

A

Ahmed, E. M., 702
Akiba, M., 231
Aldrich, P. J., 91
Allen, E., 20, 26, 146
Allen, P. T., 138, 595
Amerine, M. A., 706
Anderson, L. L., 336
Archer, T. E., 599
Armstrong, D. J., 241
Atia, R., 179

B

Baird, J., 336
Baldwin, R. E., 305
Bard, J. C., 419
Beck, W. J., 121, 125
Beckman, H., 138, 595
Bedford, C. L., 449
Bellis, D. R., 521
Ben-Gera, I., 642
Berman, M. B., 568
Berry, R. E., 75
Black, D. L., 539
Black, D. R., 279, 414, 698
Boggess, T. S. Jr., 426, 544
Bomben, J. L., 698
Borchert, L. L., 419
Bourne, M. C., 154, 601, 605
Bramblett, V. D., 289
Bray, R. W., 20, 26, 146, 258, 516
Breidenstein, D. M., 305
Briskey, E. J., 258, 317, 419, 483, 534, 565
Brungardt, V. H., 317
Bryant, E. F., 197
Büchi, W., 611
Buck, D. M., 539
Buttery, R. G., 414
Buttkus, H., 432

C

Campbell, A. M., 143, 151
Carlton, A. B., 599
Carruthers, J. D., 7
Cassens, R. G., 13, 20, 26, 146, 269, 317, 419, 516, 534, 565
Chandler, III, E. L., 61
Chang, T. S., 372
Chang, Y. O., 135
Charley, H., 310
Chen, L. F., 66
Chichester, C. O., 98, 107
Chui, C. M., 422
Chung, O., 315
Chung, R. A., 169
Cohen, H., 179
Cole, S. J., 245
Collins, J. L., 185
Constantinides, S. M., 446
Cook, C. F., 618
Craft, C. C., 656
Crawford, D. L., 332
Crosby, D. G., 138, 595, 599
Crowe, P. F., 650
Curl, A. L., 141

D

Dalton. N. F., 116
Dannert, R. D., 49
Davidek, J., 155
Davidkova, E., 35
Davis, P. L., 656
Dekazos, E., 287
Del Valle, F. R., 173, 218
Dempsey, A. H., 554
Dennison, R. A., 702
De Pizzol, J., 611
De Souza, N., 131
Di Tullio, N. W., 64
Dutra De Oliveira, J. E., 131, 592

E

Erdman, E. I., 469
Ericksen, T. H., 121, 125
Eriksson, C. E., 438
Essary, E. O., 238

F

Fan, L. T., 633
Farag, M. K., 678
Farber, L., 616
Fennema, O., 30
Fielder, M. F., 637
Fields, M. L., 235, 458, 463
Finney, E. E. Jr., 642
Finney, K. F., 315
Flath, R. A., 279
Foda, Y. H., 562
Forrest, J. C., 483
Francis, F. J., 430, 527, 647
Fromm, D., 52
Fukazawa, T., 409

G

Gadbois, D. F., 511
Gangol, S. V., 711
Gauer, W. O., 595
Gedde-Dahl, S. B., 378
Gee, M., 78
Goertz, G. E., 298
Goldblith, S. A., 61
Goll, D. E., 158, 323, 329, 386, 544
Graham, H. D., 489
Graham, R. P., 78
Greaser, M. L., 419
Gruger, E. H. Jr., 342
Guadagni, D. G., 279, 405
Gur-Arieh, C., 442

H

Hackler, L. R., 339
Hall, C. W., 352
Hamosh, M., 179
Harrington, R. B., 289
Harrison, D. L., 298, 336
Hauschild, A. H. W., 467, 469
Hawkes, S. J., 629
Hedrick, H. B., 1
Hedrick, T. I., 352
Heiligman, F., 200
Heldman, D. R., 352
Hendrickson, R. L., 57
Herring, H. K., 317, 534
Hill, W. M., 458, 463
Hilsheimer, R., 469
Hiner, R., 650
Ho, G. P., 586
Hoekstra, W. G., 258
Hoff, J. C., 121, 125
Holmes, W. L., 64
Hoogstad, B., 87
Hornstein, I., 650
Hsu, E. T., 251
Hultin, H. O., 503
Hunter, G. L. K., 697
Hutchins, B. K., 214

I

Ikehata, H., 580
Inklaar, P. A., 525, 622

J

Janicki, M. A., 375
Jay, J. M., 371
Judge, M. D., 565
Jungk, R. A., 158

K

Kaess, G., 7, 14
Kahlenberg, O. J., 1
Karel, M., 572
Kauffman, R. G., 283
Kepner, R. E., 664, 669
Khan, A. W., 35, 148, 155
Kilgore, W. W., 691
Killoran, J. J., 200
Kim, C. W., 586
Kimura, M., 531
King, A. D., 575
Koburger, J. A., 589
Kopelman, M., 694
Kortz, J., 375
Kneeland, L. E., 200
Knobl, G. M. Jr., 342
Krishnamurthy, R. G., 372
Kritchevsky, D., 64
Kropf, D., 336
Kumta, U. S., 711
Kung, J. T., 455
Kuusi, T., 686
Kytokangas, R., 686

L

Labuza, T. P., 61, 572
Lakshminarayana, S., 451
Langner, E. H., 495
Law, H. M., 637
Leong, K. C., 342
Lerke, P., 616
Levanon, Y., 609
Lewis, M. J., 414
Lewis, R. W., 516
Lillard, D. A., 682
Lien, L. C., 169
Ling, L., 414
Linskey, M. J., 521
Liuzzo, J. A., 678
Luh, B. S., 66, 251
Lui, T. H. P., 214

M

Mackintosh, D. L., 336
MacRae, H. F., 182
Main, M. J., 544
Marion, J. E., 426, 554
Markakis, P., 694
Martin, T. G., 289
Massie, D. R., 642
Mathew, A. G., 451
Matter, J. C., 305
Mavinkurve, S. S., 711
McCollum, J. P., 562
McConnell, K. G., 158
McIntosh, E. N., 210
McNaught, R. P., 455
Medwadowski, B. F., 361
Mendelsohn, J. M., 511
Menting, L. D., 87
Merkel, R. A., 336
Mesquita, M. T. P., 609
Meyer, D. D., 289
Miller, D., 342
Miller, G. J., 135
Miyamoto, T., 580
Mobley, E. O., 378
Mon, T. R., 698
Mondy, N. I., 378
Mookherjie, B. D., 372
Morgan, A. I. Jr., 78
Morgan, R. C., 275
Morita, K., 559
Moshonas, M. G., 75, 206
Motohiro, T., 231
Mourer, C., 138, 595
Mukherjee, S. K., 339
Mullins, A. M., 637
Munday, R. A., 169
Murata, K., 580

N

Nagel, C. W., 294, 575
Nakatani, H., 559
Naumann, H. D., 1
Nelson, A. I., 346, 349, 442
Newbold, R. P., 13, 269
Nickerson, J. T. R., 173, 218
Nikkila, O. E., 686
Norman, S., 656
Novak, A. F., 678

O

Obara, T., 531
Oke, O. L., 85, 453
Olcott, H. S., 361
Olsen, R. A., 228
Opliger, P. S., 675
Ough, C. S., 706

P

Paneras, E., 365
Patterson, M. E., 294
Pearson, A. M., 49
Pengilly, C., 336
Pomeranz, Y., 162, 315, 422
Pool, M. F., 550
Powrie, W. D., 30
Pratt, D. E., 479
Pratt, G. B., 200
Presnell, M. W., 121, 125
Pressey, R., 381
Puski, G., 527

R

Radar, C. P., 357
Randall, C. J., 182
Rao, R. S., 225

Raskin, M., 609
Reddy, B. R., 372
Reith, J. F., 188, 194
Rezende, T. A., 131
Richmond, B., 235
Rickansrud, D. A., 57
Ritchey, S. J., 238, 586
Robson, R. M., 323, 544
Rogers, P. J., 298
Rohan, T. A., 395, 399, 402, 625
Ronswalli, L. J., 511
Rossetini, S. M. O., 609
Rozyczka, J., 375

S

Safanie, A. H., 283
Sandifort, J., 622
Saravacos, G. D., 81
Satterlee, L. D., 682
Sawant, P. L., 711
Scatena, L., 592
Schultz, T. H., 279, 698
Schultz, W. G., 279
Schweigert, B. S., 694
Schwimmer, S., 405
Secrist, J. L., 521
Shannon, C. T., 479
Shapiro, B., 179
Shimazu, F., 273
Sink, J. D., 258
Sinnhuber, R. O., 332
Siragar, J. A., 346, 349
Smathers, R. U., 310
Smit, C. J. B., 197
Smouse, T. H., 372
Snodgrass, C. J., 589
Snyder, H. E., 158, 241
Song, P. S., 98, 107
Soong, C. C., 135
Soumithri, T. C., 225
Southard, J. H., 503
Spinelli, J., 38
Stachowicz, K., 251
Steinberg, M. P., 346, 349, 442
Steinkraus, K. H., 339
Sterling, C., 273
Stewart, T., 395, 399, 625
Stromer, M. H., 329, 386
Strong, D. H., 116
Subba, M. S., 225
Suess, G. F., 317
Sulser, H., 611
Sun, B. H., 647
Szakaly, M., 188, 194

T

Takahashi, K., 409
Tanikawa, E., 231
Tao, R. P. C., 162
Taylor, A. McM., 261
Tepper, S. A., 64
Teranishi, R., 279, 698
Terrill, R. N., 516
Thatcher, F. S., 467, 469
Tihanyi, S. G., 357
Tobias, J., 495
Troller, J. A., 228
Tseng, J. T., 633
Tu, C., 30
Turkki, P. R., 143, 151

U

Underriner, E., 365
Upchurch, R., 305

V

Vail, G. E., 289
Van Buren, J. P., 435
van den Berg, L., 148
Vandercook, C. E., 42
Van Der Veen, J., 361
van Veen, A. G., 339
Van Wyk, C. J., 660, 669
Vasconcelos, G. J., 121, 125
Veldhuis, M. K., 697

W

Wada, S., 559
Wagner, C. J. Jr., 75
Walters, C. L., 261
Watts, B. M., 214
Webb, A. D., 660, 664, 669
Webb, N. B., 1
Wei, L. S., 346, 349
Weidemann, J. F., 7, 14
Weissmann, S., 129
Wheaton, M. D., 629
White, R., 691
Wick, E. L., 365
Wiley, R. C., 185
Woodruff, J. G., 426, 554
Worley, J. F., 287

Y

Yamaguchi, S., 473
Yang, S. P., 637
Yannai, S., 129
Yasui, T., 409
Yeransian, J. A., 455
Yokoyama, H., 42
Young, R. W., 238
Yu, T. C., 332

Z

Zabik, M. E., 91
Zienty, F. B., 357
Zimmerman, G., 129

Subject Index — *Journal of Food Science* — Volume 32, 1967

A

acceptability, idli, 339
actomyosin, solubility, salter fish, 686
additives
  beef, effect on metmyoglobin and malonaldehyde, 214
  beef, effect on reducing activity, 214
adenosine triphosphate, degradation, effect of temperature, 390
aerosol chamber, for air-borne bacteria studies, 352
aftertaste, saccharin, 357
age, tenderness and collagen content, 586
aging
  beef, 49
  cherries, inducing callose formation, 287
  chicken meat, 155
  post-mortem, effect on mucoprotein, 210
air-borne contamination, through openings, 352
Allium, odor intensification, 405
almonds, herbicide residues, 691
amino acids
  cocoa beans, during roasting, 625
  free, cocoa bean fermentation, 395
  free, in meat, 682
  free, tomato powders, 78
  sugar interaction products, 495
analysis, complex mixtures, statistics, 629
analysis procedures, chromatography for free amino acids, 682
anthocyanidin, pears, 310
anthocyanins
  apple, 647
  asparagus, 430
  Royalty grapes, 66
antimicrobial action, citrus oils, 225
antitryptic activity, leguminous seeds, cotyledons, 129
apo-10′-violaxanthol, carotinoid from orange peels, 141
apparatus, for isometric tension measurements, 158
apple
  anthocyanins, 647
  dehydrated, 81
  essence, volatiles, 279
  phenoloxidase, 446
  polyphenol oxidase activity, 479
  slices, thermal processed, 185
apricots, herbicide residues, 691
aromatic, substance from mushroom, 559
ascorbic acid, in Nigerian vegetables, 85
asparagus
  anthocyanins, 430
  white, dalapon residue, 599
aspergillus flavus, conedia, effect of radiation, 694
assay, hemoglobin-splitting catheptic activity, 568
ATP degradation in chicken muscle, 155
autoradiography
  apple slices, 185
  fish protein storage changes, 686

B

Bacillus stearothermophillus
  effect of media and pH, 463
  effect of oxygen tension and temperature, 458
  variants, growth factors, 458, 463
bacteria
  irradiated Bombay duck, 711
  proteolytic activity, low-level radiation effect, 678
  transport at openings, 352
  Tribe *Mimeae* in foodstuffs, 589
bacterial action, canned baby clams, 231
bacteriological changes
  live shellfish, 121
  shucked oysters, 125
bacteriostatic activity, overcoming, plate count of onions, 346
bananas, ripening, objective evaluation, 642
beans, green, irradiated, headspace gas, 200
beef
  cholesterol content, 30
  collagen content, 586
  effect of additives and refrigeration, 214
  exudate, mineral components, 2
  freezer-burn, 14
  Fulani, nutritive value, 453
  ground, fat content, 521
  hydrolytic enzymes, 182
  hypoxanthine-uric acids, 289
  IMP and aging, 49
  irradiated, extract release volume, 371
  irradiated, headspace gases, 200
  lipids, 143
  loin and top-round steaks, quality, 637
  microscopy of myofibrils, 386
  molecular activity, muscle, 323, 329, 386, 390, 544
  muscle, collagen solubility, 534
  muscle, physical characteristics, 539

muscles, composition, 650
nucleotide content, 289
phospholipids and other components, 151
physical changes, aging, 158
plasma albumen, malonaldehyde reaction, 332
protein extractability, 208
protein solubility, effect of rigor, 618
reducing activity, metmyoglobin and malonaldehyde, 214
rigor mortis, time course, 269
skeletal muscles, mucoprotein, 210
subcutaneous fat depots, 516
temperature and pH, 13
tenderness, biochemical factors, 1
tenderness, effect of rigor, 7
tenderness, stretched and contracted muscles, 317
total pigments and myoglobin, 57
vitamin A supplements, 289
water-holding capacity, 1, 371
beef gravy, frozen, microorganisms, 116
beer, volatile hop constituents, 414
biochemical changes, chicken freezing, 148
biochemical factors, beef tenderness, 1
biochemical properties, curing pork, 261
bitterness, saccharin, 357
blackening, canned baby clams, 231
blueberry pie, frozen, microorganisms, 116
Bombay duck, irradiated, bacterial studies, 711
bovine (*see:* beef)
Brazil, infants and young children, food mixture, 131
bread-making potentials, flour, 162
brining, sweet cherries, SO_2, pectic substances, 435
bromide content, foodstuffs, from soil fumigants, 138
bromide residue, determination, polarographic, 595
browning
apple, chlorogenic acids, 479
foods, CO_2 production, 245
bruising, cherries, inducing callose formation, 287

C

calcium, in meat, 622
calicum ions, apple slices, penetration and distribution, 185
callose, formation, cherries, 287
can-swelling, baby clams, bacterial action, 231
carbohydrate solutions, drying, 87
carbonyl compounds, volatile, clam meat, 511
carbon dioxide
growth inhibition in Pseudomonas, 575
production, Maillard reaction, 245
carotenes, watermelons, 275
carotenoids, citrus, 42
carotenoid, from Valencia orange peels, 141
carotenoids
mature-green and yellow lemon, 42
watermelon, 275
carrageenan
precipitated by tetrazolium salts, 489
viscosity, 91
catheptic activity
assay of hemoglobin-splitting, 568
chicken muscle, 568
cations effect, on lambda-carrageenan, 91
cellular distribution, lactate dehydrogenase in chicken, 503
cellulose, crystallnity changes during drying, 273
characterization
Mimeae in foodstuffs, 589
sugar-amino acid products, 495
cherries
herbicide residues, 691
irradiated, headspace gas, 200
red tart, bruising and aging, 287
sweet, alteration of pectic substances, 435
chicken
ATP and inosinic acid, 155
breasts, dehydrogenase distribution, 503
broiler flesh, flavor, 342
dietary effect on lipids, 426
freezing, biochemical and quality changes, 148
frozen storage, lipids, 35
irradiated, headspace gases, 200
meat, tissue tenacity, 550
muscle, catheptic activity, 568
pectoral muscle, morphological changes, 409
pesticide residues, 238
protein extractability, 208
chili, irradiated, headspace gas, 200
chlorinated hydrocarbon pesticide, residues in chicken, effect of cooking, 238
chlorogenic acids, apple browning, 479
chocolate aroma, precursors, cocoa beans, 395, 399, 402, 625
cholesterol
fatty acids of turkey meat, 169
in seafood, 64
total and free, animal muscle, 30
chromatography
apple anthocyanins, 647
asparagus anthocyanins, 430
chicken lipids, 426
citrus carotenoids, 42
column, pectin separation, 197
cranberry glycosides, 527
electron-capture gas, herbicide residues, 691
FPC residual lipids, 361
FPC volatiles, 365
gas, chocolate aroma, 402
gas, flavor extracts, 499
gas, free amino acids in meat, 682
gas–liquid, fatty acids in fat depots, 516
gas-liquid for lipids, 143
gas, volatile acids in coffee, 455
gas, volatiles from grapes, 660, 664, 669
grape anthocyanins, 66
leucoanthocyanidins of sapota fruit, 451
orange essence, volatiles, 698
peaches, polyphenolic compounds, 251
thin-layer, cocoa lipids, 609
thin-layer, phospholipids, 151
thin-layer, wine, 669
volatile hop constituents, beer, 414
citrus
carotenoids, 42
essential oils, naming compounds, 697
oils, antimicrobial actions, 225
pectin fraction separation, 197
clams, volatile carbonyl compounds, 511
clams, baby, canned, can-swelling and blackening, 231
clams, Manila, live, bacteriological changes, 121
clams, native littleneck, live, bacteriological changes, 121
Clostridium perfringens Type A, experimental food poisoning, 467
recovery variations on agar, 469
cocoa beans
degradation of amino acids during roasting, 625
fermentation, free amino acids, 395
fermentation, gas chromatography, 402
fermentation, reducing sugars, 399
lipids, 609
precursors of chocolate aroma, 395, 399, 402, 625
cocoa butter, lipids, 609
coffee, formic and volatile acids, 455
collagen
content, bovine muscle, 534
content, tenderness, 586
solubility, bovine muscle, 534
solubility, factors affecting, 534
color, pork, physiochemical properties, 375
color preference, rosé wine, 706
colorimetric determination
copper and iron in oils, 572
volatile reducing substances, 616
complex mixtures, statistical analysis, 629
composition
bacteria in Bombay duck, 711
beef, 143, 151
beef lipids, 650
broiler flesh, fatty acids, 342
cocoa beans, 395, 399
fatty acids, bovine subcutaneous fat, 516
fatty acids in chicken lipids, 426
fatty acids in pork lipids, 26, 145, 258
fish protein concentrate, 361, 365
flours, 162
Fulani cattle, 453
green peas, 438
meat, Ca and Mg, 624
pork, 143
soybeans, 580
sweet potatoes, lipid changes, 554
tempeh, 580
turkey meat, 169
volatile acids in coffee, 455
wheat, 422
conidia, resting, *Aspergillus flavus*, effect of radiation, 694
connective tissue
tenacity, factors affecting, 550
tenderness, collagen content, 586
contracted muscles, bovine, tenderness, 317
cooking
effect on loin and steak quality, 637
effect on pesticide residues in chicken, 238
pork loin, time variation, 336
cooking beef, and rigor, effect on tenderness, 7
copaene, nomenclature, 697
copper, in oils, 572
cranberries, flavanol glycosides, 527
crystallinity, cellulose, dehydration changes, 273
cubebene, nomenclature, 697
curing, pork, biochemical properties, 261
cyanidin-7-arabinoside, from apple, 647
cysteine, induced odor intensification, 405

D

dalapon, residues, white asparagus, 599
DDT, residues in chicken, 238
deformation testing
  foods, 601, 605
  precise techniques, 601
  spring model, 605
  universal testing machine, 601
dehydration
  apple and potato water sorption, 81
  aqueous carbohydrate solutions, 87
  bell peppers, 273
  changes in cellulose crystallinity, 273
  onion, 273
dehydrogenase, lactate, chicken, 503
development, pear, pectic enzymes, 294
2,2-dichloropropionic acid, see dalapon
dietary fat, fatty acids of turkey meat, 169
dietary fat and protein, effect on chicken lipids, 426
diethylaminoethyl-cellulose columns, separation of pectin fraction, 197
diethylstilbestrol, fatty acids of turkey meat, 169
diffusion, apparent, honey-water system, 633
4,6-dinitro-o-sec-butylphenol residues, determination in fruits and almonds, 691
diphasic fluid, viscosity determination, 562
discoloration, potatoes, effect of fertilization, 378
disodium 5'-inosinate, synergistic taste effect, 473
DNA, beef muscles, 151
drying method, effect on water sorption, 81

E

egg
  vitelline membrane during storage, 52
  white coagulation by microwaves, 305
  whole, irradiated off-flavor, 61
electrical stimulus, pork striated muscles, 483
electron microscopy, meat emulsion, 419
electronic cooking, egg white coagulation, 305
electrophoresis
  gel, phenoloxidase, 446
  starch-gel, water-soluble proteins, 182
emulsion, meat, electron microscopy, 419
enzymatic activity, potatoes, effect of fertilization, 378
enzyme
  lipoxidase in green peas, 438
  nucleoside triphosphatase, 544
  pectic, pear development, 294
  phenoloxidase, 446
  tenderizers, effect on mucoproteins, 210
equilibrium considerations, salting fish, 173
essence
  apple, volatiles, 279
  orange, constituents, 698
estimating oxygen demands, liquid peach waste, 675
ether soluble, sugar-amino acid products, 495
extraction, apple essence, volatiles, 279

F

fat
  accumulation, atypical intrafascicular in pork, 146
  content, ground beef, 521
  depots, bovine subcutaneous, 516
  Fulani cattle, 453
fats and oils, 2-pentyl furan, 372
fatty acids
  in beef and pork lipids, 143
  bovine subcutaneous fat depots, 516
  broiler flesh, effect of fish oils, 342
  chicken muscle lipids, 426
  FPC residual lipids, 361
  free, beef muscles, 652
  porcine muscle lipids, effect of sex and weight, 26
  pork, intrafascicular fat, 146
  sweet potato lipids, 554
  turkey meat, 169
fermented food
  idli from India, 339
  tempeh, 580
fertilization, potassium, effect on potatoes, 378
firmness, evaluating, ripening bananas, 642
fish
  irradiated, bacterial studies, 711
  lysolithinase, 179
  salting and drying, 173, 218
fish protein concentrate
  composition, 361, 365
  residual lipids, 361
  volatile constituents, 365
flavor
  beef, 289
  broiler flesh, effect of menhaden oils, 342
  lenthionine from mushroom, 559
  nootkatone in grapefruit, 75
  precooked frozen foods and microorganisms, 116
  reversion, soybean oil, 372
  vegetable-protein hydrolysates, 611
flavonol glycosides
  cranberries, 527
flour
  bread-making potentials, 162
  lipids, from irradiated wheat, 315
  moisture content of low-protein fraction, 442
  pentosans, 162
food mixture, for infants and children, 131
food poisoning
  Clostridium perfringens, symptoms, 467
  experimental, *Clostridium perfringens*, 467
food preservatives, sorbic acid derivatives, 228
foods
  bromide and soil fumigants, 138
  deformation testing, 601, 605
  Maillard reaction, 245
formation, nitric oxide myoglobin, 188, 194
formic acid, coffee, NMR determination, 455
FPC (*See*: fish protein concentrate)
freezer-burn
  less in high quality beef, 14
  ox muscle frozen pre- and post-rigor, 14
freezing, chicken, biochemical and quality changes, 148
fumigants, soil treatment, bromide in foods, 138
fungal metabolites, effect of pH, 235

G

gases, headspace, irradiated foods, 200
gel-filtration fractionation, soybean protein, 531
glycosides, flavonol, cranberries, 527
grapes, Royalty, anthocyanins, 66
grape, vinifera, volatile components, 660, 664
grape juice, vinifera, volatile components, 660
grapefruit juice, flavor studies, 75
growth
  inhibition, Pseudomonas, 575
  pork muscle structure, 283
growth factors, *Bacillus stearothermophillus*, 458, 463
germs, food, and tetrazolium salts, 489

H

halibut, nucleotides, 38
heat induced moisture changes, turkey, 298
heating, effect on clam carbonyl compounds, 511
hemoglobin-splitting, catheptic activity, chicken, 568
herbicide residues in fruits and almonds, 691
Herellea in foodstuffs, 589
herring, Baltic, salted, actomyosin solubility, 686
histochemical observations, porcine muscle, lipid accumulation, 20
histology, beef, effect of cooking and rigor, 7
honey, water system, apparent diffusivity, 633
hop constituents volatile, beer, 414
hydrocolloids reaction with tetrazolium salts, 489
hydrolysates, vegetable-protein, flavor, 611
hypoxanthine in halibut, 38
hypoxanthine-uric acid, beef muscles, 289

I

idli, nutritive quality, 339
India idli, nutritive quality, 339
infants food mixture in Brazil, 131
infrared spectroscopy, grape volatiles, 660, 664, 669
inhibition
  growth, Pseudomonas, 575
  Maillard reaction, 98, 107
injured and uninjured oranges, volatiles at different temperatures, 656
inosine monophosphate (IMP)
  concentration in meat, 49
  in halibut, 38
inosinic acid, chicken muscle, 155
Instron tensile tester, chicken breast muscle, 550
iron in oils, 572
irradiated
  beef, extract-release volume, 371
  beef, water-holding capacity, 371
  low-level, proteolytic activity of oyster bacteria, 678
  wheat, flour lipids, 315

irradiation
effect on *Aspergillus flavus* resting conidia, 694
effect on clam carbonyl compounds, 511
effect on ripening mangoes, 702
induced gases in packaged foods, 200
whole-eggs, off-flavor, 61
isolation
Mimeae in foodstuffs, 589
sugar-amino acid products, 495
isometric tension parameters, effect of temperature, 390

K

α-ketobutyric acid and protein hydrolysate flavor, 611
ketones from orange oil, 206
kinetic behavior
d-glucose-glycine reaction, 98
Maillard reaction, 98, 107

L

lactate dehydrogenase in chicken breast muscle, 503
lactic acid concentration, electrical stimulus response, 483
lamb, IMP and aging, 49
laser interferometric diffusion cell, honey-water system, 633
leguminous seeds, protein, lysine, methionine and antitryptic activity, 129
lemon
carotenoids, 42
oils, antimicrobial action, 225
lenthionine aroma-bearing *Shiitake*, 559
leucoanthocyanidins
sapota fruits, 451
pears, measuring, 310
Lindane residues in chicken, 238
lipid accumulation
histochemical observations on pork, 20
pork, effect of muscle structure, 283
lipid composition
frozen chicken muscle, changes, 35
normal porcine muscle, 258
pale, soft, exudative porcine muscle, 258
lipids
beef and pork, raw and cooked, 143
beef muscles, 151
beef muscles, composition, 650
changes, stored sweet potatoes, 554
cocoa, beans and butter, 609
composition and oxidation, chicken, 426
fatty acids in broilers fed fish oil, 342
flour from irradiated wheat, 315
residual, extraction methods, 361
residual, fish protein concentrate, 361
turkey meat, 169
wheat kernels of varying size, 422
lipoxidase
distribution in green peas, 438
substrate in green peas, 438
liver lipid composition in rats, effect of starches, 135
lysine leguminous seeds, cotyledons, 129
lysolecithinase fish muscle, 179

M

macaroni and cheese frozen, microorganisms, 116
magma whole-egg, off-flavor, 61
magnesium in meat, 622
Maillard reaction foods, CO_2 production, 245
Maillard reaction
inhibition and kinetic behavior, 98, 107
inhibition, mechanism, 107
malonaldehyde
beef, effect of additives and refrigeration, 214
reaction with myosin, 432
reaction with protein, 332
mangoes ripening, irradiation effect, 702
mass spectra orange essence constituents, 698
measuring connective tissue in chicken, 550
meat
color, spectrophotometry, 241
determining calcium and magnesium, 622
emulsion, electron microscopy, 419
free amino acids, 682
interaction with polyphosphates, 525
nitric oxide myoglobin, 194
meat products, cholesterol content, 30
media effect on *Bacillus stearothermophillus*, 463
menhaden oils
refined, effect on broiler flavor, 342
refined, effect on fatty acids, 342
methyl esters volatile acids, White Riesling grapes, 662
6-methyl-5-hepten-2-one from orange oil, 206
methionine leguminous seeds, cotyledons, 129
metmyoglobin beef, effect of additives and refrigeration, 214
microbiology, raw onions, 349
microorganisms, precooked frozen foods, 116
microwaves effect on egg-white coagulation, 305
milk, soybean, powder, 592
Mima bacteria, in foodstuffs, 589
Mimeae in foodstuffs, 589
minerals, Fulani cattle, 453
mitochondria and nitrite, pork curing, 261
moisture changes, turkey muscle, heat induced, 298
moisture content
low-protein flour fraction, 442
Nigerian vegetables, 85
5′-monophosphate in meat, 49
monosodium glutamate synergistic taste effect, 473
muscle striated, response to electricity, 483
muscle structure, pork, lipids during growth, 283
mushrooms phenoloxidase, 446
mucoprotein effect of aging and tenderizers, 210
myofibrils
fragmentation, chicken, 409
nucleosidetriphosphatase in, 323
phase microscopy, 329, 386
myoglobin
concentration in bovine muscle, 57
effect of nitrite, pork curing, 261
nitric oxide, 188, 194
reflectance spectrophotometry, 241
myosin reaction with malonaldehyde, 432
myosin B bovine, nucleoside triphosphatase, 544

N

neutral components, White Riesling wine, 669
nitrite role, pork curing, 261
nitric oxide myoglobin formation and stability, 188, 194
nomenclature ylangene, copaene, cubebene, 697
nootkatone grapefruit juice, 75
nucleoside triphosphatase
activity, bovine muscle, 323
activity, bovine myosin B, 544
nucleotide content, beef muscles, 289
nucleotides degradation, ice-stored halibut, 38
nutritional value soybean milk powder protein, 592
nutritive value
idli, 339
tempeh, 580

O

odor cysteine induced, onion, 405
off-flavor in irradiated whole eggs, 61
oils determining copper and iron, 572
onion odor intensification, 405
onions
dehydration, 273
overcoming bacteriostatic activity, 346
raw, plate counts, 349
orange
essence constituents, 698
oil, antimicrobial action, 225
oil, ketones, 206
peels, new carotenoid, 141
injured and uninjured, volatiles, 656
organic acids, White Riesling wine, 664
organoleptic evaluation onion odor, 405
oxygen
demands, liquid peach waste, 675
tension effect on *Bacillus stearothermophillus*, 458
oysters
bacteria, proteolytic activity, 678
Olympia live, bacteriological changes, 121
Olympia shucked, bacteriological changes, 125
Pacific live, bacteriological changes, 125
Pacific shucked, bacteriological changes, 125

P

packaged food, irradiation, induced gases, 200
packaging and air-borne contamination, 352
panel experienced and inexperienced, wine, 706
peach
waste, estimating oxygen demands, 675
canned, polyphenolic compounds, 251
herbicide residues, 691
pear
development and pectic enzymes, 294
leucoanthocyanin, 310
peas, green, lipoxidase, 438
pectic enzymes, pear development, 294
pectic substances, alteration during SO_2 brining of cherries, 435
pectin fractions
citrus, separations, 197

physicochemical properties, 197
penetration, calcium ions in apple slices, 185
pentosans, water-soluble, flours, 162
2-pentyl furan
fats and oils, 372
soybean oil, reversion flavor, 372
peppermint oil, statistical analysis, 629
peppers, bell, dehydration, 273
pesticide residues
bromide, foodstuffs, 595
chicken, effect of cooking, 238
dalapon, asparagus, 599
pH
effect on *Bacillus stearothermophillus*, 463
effect on fungal metabolites, 235
and temperature, ox muscle, 13
phenolic compounds, apple, polyphenol oxidase, 479
phenolic content, potatoes, effect of fertilization, 378
phenoloxidase, multiple forms, 446
phosphate inhibition of fish protein changes, 686
phosphoglucomutase, potato, purification and properties, 381
phospholipids
beef and other components, 151
fresh chicken muscle, 35
raw and cooked meat, 143
physical changes, muscle, 158
physical state during rigor, effect on protein solubility, 618
physicochemical changes, vitelline membrane of egg, 52
pigments
bovine muscle, 57
pears, 310
watermelon, 275
piperitenone from orange oil, 206
plate count
overcoming onion bacteriostatics, 346
raw onions, effect of storage, 349
polarographic method, bromide residues, foodstuffs, 595
polyphenol oxidase activity, apple, phenolic compounds, 479
polyphenolic compounds, canned peaches, 251
polyphosphates, interaction with meat, 525
porcine (*See:* pork)
pork
cholesterol content, 30
color and physicochemical properties, 375
curing, biochemical properties, 261
fatty acids in lipids, 26
histochemistry and lipid accumulation, 20
IMP, 49
intrafascicular accumulation of fat, 146
irradiated, headspace gases, 200
lipids, 143
loin, posterior to anterior variation, 336
muscle properties, 565
muscle structure, lipids, 283
normal, lipids, 258
pale, soft, exudative, lipids, 258
protein extractability, 208
striated muscle, electrical stimulus, 483
post-mortem aging, inosinic acid in chicken, 155
post-mortem changes
ox muscle, temperature and pH, 13
protein extractability in meat, 208
potassium sulfite to counteract bacteriostatic activity, 346
potato
dehydrated, 81
discoloration and fertilization, 378
enzymatic activity and fertilization, 378
phenolic content and fertilizer, 378
phenoloxidase, 446
phosphoglucomutase, 381
sweet, lipid changes, 554
poultry *See* specific birds
precooked frozen foods, microorganisms and flavor, 116
preference stability, rosé wine, 706
properties
biochemical, pork curing, 261
molecular, post-mortem muscle, 323, 329, 386, 390, 544
muscle, restrained pigs, 565
pectin, fraction, 197
phosphoglucomutase, potato, 381
physicochemical, pork and color, 375
protein
calcium and magnesium content, 525
denaturation, myosin-malonaldehyde reaction, 432
extractability and post-mortem, 208
fish, storage changes, 686
Fulani cattle, 453
leguminous seeds, cotyledons, 129
muscle, bovine, 323
reaction of malonaldehyde, 332
salt fish, phosphate inhibition of change, 686
solubility, bovine muscle, 618
soybean milk powder, nutritional value, 592
soybean, water extractable, 531
vegetable, hydrolysate, flavor, 611
protein fractions
beef muscles, 151
low, moisture content of flour, 442
protein utilization in rats, effect of starches, 135
proteolytic activity
bacteria in irradiated oysters, 678
water-soluble proteins, beef, 182
Pseudomonas growth inhibition by CO_2, 575
purification phosphoglucomutase, potato, 381
purines and nucleotides in halibut, 38

Q

quality
bacteriological, stored shellfish, 121, 125
brined sweet cherries, 435
changes, chicken freezing, 148
food, indicated by fungal metabolites, 235
loins and steaks, storage and cooking, 637
meat, associated with color, 375
nutritive, idli, 339

R

rabbit, physical changes, aging, 158
radioactive tracer Ca^{45}, apple slices, 185
rats, protein utilization and lipids, 135
reducing activity, beef, effect of additives and refrigeration, 214
reducing substances, volatile, colorimetry, 616
reducing sugars, cocoa bean fermentation, 399
refrigeration
beef, effect on metmyoglobin and malonaldehyde, 214
beef, effect on reducing activity, 214
retention, volatiles during drying, 87
rigor
effect on freezer-burn, 14
effect of stretch-tension, muscle, 539
effect on tenderness, 7
ox muscle, histology, 7, 14
rigor mortis
bovine muscle, molecular properties, 323, 329, 386, 390, 544
bovine muscle, protein solubility, 618
meat tenderness, 158
ox muscle, time course, 269
ripening, mangoes, irradiation effects, 702
ripening, bananas, sonic technique for testing, 642
roasting and cocoa bean amino acids, 625

S

saccharin
bitterness and aftertaste, 357
true taste, 357
salting
fish, 173, 218
fish, dynamic aspects, 218
sample holder, modified, for viscosity determination, 562
sapota fruit, leucoanthocyanidins, 451
sarcomeres, reversible contraction, chicken, 409
Saurida undosquamus, lysolecithinase, 179
seafood, sterols, 64
sex, effect on pork lipids, 26
shear resistance, beef, effect of temperature, 390
shellfish
live, bacteriological changes, 121
stored, bacteriological quality, 121, 125
Shiitake, edible mushroom from Far East, 559
skeletal muscle, bovine, proteolytic activity, 182
soil fumigants and bromide in foodstuffs, 138, 595
solvent technique
direct colorimetric determination, 572
for fat content, compared with thermal, 521
sonic technique, firmness evaluation, ripening bananas, 642
sorbic acid derivatives, as food preservatives, 228
sorbohydroxamic acid as a food preservative, 228
soybean
milk powder, protein, 592
water extractable protein, 531
tempeh, 580
soybean oil reversion flavor, 372
spectrophotometry reflectance, meat, 241
spring model testing food deformation, 605
stability, nitric oxide myoglobin, 188, 194

starches, effect
on liver lipid composition in rats, 135
on protein utilization in rats, 135
statistical method analysis of complex mixtures, 629
sterols, seafood, 64
storage
effect on clam carbonyl compounds, 511
effect on loin and steak quality, 637
effect on raw onions, plate count, 349
frozen chicken, lipid changes, 35
hen eggs, 52
salt fish, inhibiting protein change, 686
sweet potatoes, lipid changes, 554
tomato powders, 78
stress, water-holding capacity and juiciness, 3
stressor
resistant pigs, muscle properties, 565
susceptible pigs, muscle properties, 565
stretch-tension during rigor, effect on muscle, 539
stretched muscle
bovine, protein solubility, 618
bovine, tenderness, 317
structure, muscle, bovine, 329
sugar, amino-acid interaction products, 495
sulfated polysaccharides, reaction with tetrazolium salts, 489
sulfhydryl compounds, onion odor, 405
sulfite-polymyxin-sulfadiazine agar variations in recovery, *Colstridium perfringens,* 469
sulfur dioxide, brining sweet cherries, pectins, 435
supercontraction, bovine muscle, 329, 386
swordfish salting studies, 173, 218
synergism taste, monosodium glutamate and disodium 5′-inosinate, 473

T

taste
synergist, monosodium glutamate and disodium 5′-inosinate, 473
true, saccharin, 357
tempeh, nutritive value, 580
temperature
beef, effect on physicochemical properties, 390
different, orange volatiles, 656
effect on *Bacillus stearothermophillus,* 458
effect of, rigor mortis in ox muscle, 269
ox muscle and pH changes, 13
tenderizers, enzyme, effect on mucoprotein, 210
tenderness
beef, biochemical factors, 1
beef and rabbit muscle, 158
bovine muscles, 317
collagen content in connective tissue, 586
effect of stretch-tension during rigor, 539
frozen chicken, 148
tetrazolium salts
reaction with hydrocolloids, 489
reaction with sulfated polysaccharides, 489
texture, (*See:* quality)
thermal technique for fat content, compared with solvent, 521
time course, rigor mortis, temperature effect, 269
tissue tenacity, connective, measurement, 550
tomato
juice, viscosity, 562
powders, foam-mat-dried, 78
powders, free amino acids, 78
tracer techniques, fish protein storage, changes, 686
turkey, heat-induced moisture changes, 298

U

universal testing machine for food deformation, 601

V

variables, fish salting, 173
variation
pork loin, anterior to posterior, 336
recovery, Clostridia on agar, 469
within pork loin, 336
vegetables, Nigerian, ascorbic acid content, 85
viscosity
diphasic fluid, sample holder, 562
effect of cations, 91
of lambda-carrageenan, 91
water-soluble pentosans, flours, 166
vitamin A supplements, beef muscles, 289
vitelline membrane egg, during storage, 52
volatile
acids, coffee, 455
carbonyl compounds in clam meat, 511
components, vinifera grape, 660, 664, 669
hop constituents, beer, 414
constituents, FPC, 365
reducing substances, colorimetry, 616
apple essence, extraction, 279
from injured and uninjured oranges, 656
orange, essence constituents, 698
retention, drying carbohydrate solutions, 87

W

waste, liquid pack, oxygen demands, 675
water
honey system, apparent diffusivity, 633
holding capacity, beef, 1, 371
sorption, effect of drying method, 81
watermelon carotenoids, 275
weight, effect on pork lipids, 26
wheat
irradiated, lipid from flour, 315
kernels, lipids, 422
wine
neutral components, 669
organic acids, 664
rosé, color preference and preference stability, 706

Y

ylangene nomenclature, 697
young children, food mixture in Brazil, 131